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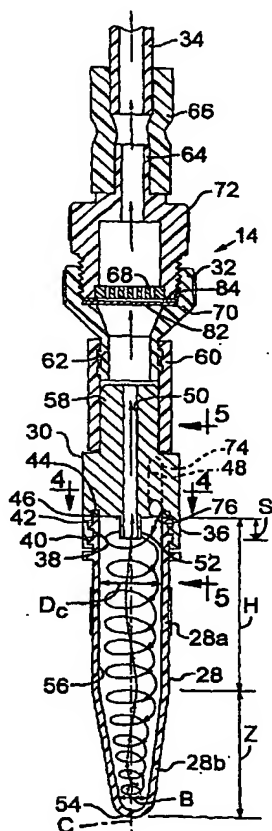
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- (51) **International Patent Classification⁷:** G01N 1/24, 15/00 (72) **Inventors; and**
 (21) **International Application Number:** PCT/US2004/032378 (75) **Inventors/Applicants (for US only):** CHEN, Teh-Hsun, B. [US/US]; 4110 Cover Point Drive, Morgantown, WV 26508 (US). FEATHER, Gregory [US/US]; 959 Irwin Street, Morgantown, WV 26505 (US). KESWANI, Jyoti [US/US]; 3157 Sylvan Circle, Morgantown, WV 26508 (US). EDGELL III, Herbert, David [US/US]; 648 Little Falls Rd., Morgantown, WV 26508 (US).
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- (54) Title: AIR-SAMPLING DEVICE AND METHOD OF USE**



(57) Abstract: The present disclosure concerns embodiments of a sampling apparatus that utilizes one or more cyclone separators to collect airborne particles from the atmosphere. In one representative embodiment, the sampling apparatus includes a collection-vessel retaining member that is adapted to be removably coupled to a collection vessel. The retaining member has an air-inlet conduit for permitting air to flow through the open end of the collection vessel and an air-outlet conduit for permitting air to exit the open end of the collection vessel. The airinlet conduit and the air-outlet conduit are configured to cause air flowing into the collection vessel to establish a cyclonic flow path, which causes airborne particles to separate out from the air stream and collect in the collection vessel.

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